

## AIR QUALITY PERMIT

Issued To:	Devon Louisiana Corporation	Permit: #3145-04
	Blaine County #5 Compressor Station	Application Complete: 07/19/05
	PO Box 2606	Preliminary Determination Issued: 08/18/05
	Havre, Montana 59501	Department's Decision Issued: 09/06/05
		Permit Final: 09/22/05
		AFS #: 005-0013

An air quality permit, with conditions, is hereby granted to Devon Louisiana Corporation (Devon) for the Blaine County #5 Compressor Station, pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

### SECTION I: Permitted Facilities

#### A. Plant Location

The Blaine County #5 Compressor Station is located approximately 12 miles north of Chinook in the SE¼ of the SE¼ of Section 19, Township 35 North, Range 20 East, in Blaine County, Montana. A listing of the permitted equipment is contained in Section I.A of the permit analysis.

#### B. Current Permit Action

On July 19, 2005, the Department of Environmental Quality (Department) received a complete application from Devon requesting a change to air quality Permit #3145-03. The proposed change includes adding a rich-burn compressor engine equal to, or less than 325 horsepower (hp) equipped with a non-selective catalytic reduction (NSCR) unit and an air to fuel ratio (AFR) controller.

### SECTION II. Conditions and Limitations

#### A. Emission Limitations

1. An NSCR unit and an AFR controller shall control emissions from the 250-hp Waukesha F11GSI rich-burn natural gas-fired compressor engine. Emissions from the compressor engine shall not exceed the following limits (ARM 17.8.752):

NO <sub>x</sub> <sup>1</sup>	0.55 lb/hr
CO	0.28 lb/hr
VOC	0.55 lb/hr

2. Emissions from the rich-burn compressor engine, less than or equal to 325-hp, shall be controlled with a NSCR unit and an AFR controller and emissions from the engine shall not exceed the following limits (ARM 17.8.752):

Emission Limit (pounds per hour (lb/hr)) = Emission Factor (grams per brake horsepower-hour (g/bhp-hr)) \* maximum rated capacity of engine (bhp) \* 0.002205 pounds per gram (lb/g).

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<sup>1</sup> NO<sub>x</sub> reported as NO<sub>2</sub>.

NO<sub>x</sub><sup>2</sup> 1.0 g/bhp-hr  
CO 2.0 g/bhp-hr  
VOC 1.0 g/bhp-hr

3. Devon shall operate all equipment to provide the maximum air pollution control for which it was designed (ARM 17.8.749).
4. Devon shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over six consecutive minutes (ARM 17.8.304).
5. Devon shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
6. Devon shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.5 (ARM 17.8.749).

#### B. Testing Requirements

1. Devon shall initially test the 250-hp Waukesha compressor engine for nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO) concurrently, to demonstrate compliance with the emission limits in Section II.A.1, within 180 days of the initial start up date of the compressor engine. Further testing shall continue on an every five-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.749).
2. The rich-burn compressor engine, equal to or less than 325-hp, shall be initially tested for NO<sub>x</sub> and CO, concurrently, to demonstrate compliance with the emission limits in Section II.A.2, within 180 days of the initial start up date of the compressor engines. Further testing shall continue on an every five-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.749).
3. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
4. The Department may require further testing (ARM 17.8.105).

#### C. Operational Reporting Requirements

1. Devon shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis. Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

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<sup>2</sup> NO<sub>x</sub> reported as NO<sub>2</sub>.

2. Devon shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).
3. All records compiled in accordance with this permit must be maintained by Devon as a permanent business record for at least five years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

D. Notification

Devon shall provide the Department with written notification of the following information within the specified time periods:

1. Devon shall provide the Department with written notification of the actual start-up date(s) of the compressor engine(s) within 15 days after the actual start-up date(s) (ARM 17.8.749).
2. Devon shall provide the Department with written notification of the engine models utilized within 15 days after the actual start-up date(s) (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection – Devon shall allow the Department’s representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if Devon fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Devon of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not

stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Devon may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must begin within three years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).

Permit Analysis  
Devon Louisiana Corporation  
Blaine County #5 Compressor Station  
Permit #3145-04

I. Introduction/Process Description

A. Permitted Equipment

Devon Louisiana Corporation's (Devon) Blaine County #5 Compressor Station consists of the following equipment:

1. (1) 250-horsepower (hp) Waukesha F11GSI compressor engine
2. (1) ALCO Dehydrator including a still vent, reboiler, and flash tank
3. (1) Rich-burn compressor engine equal to, or less than 325-hp
4. Associated equipment

B. Source Description

The natural gas compressor station is located approximately 12 miles north of Chinook in the SE¼ of the SE¼ of Section 19, Township 35 North, Range 20 East, in Blaine County, Montana. The facility is known as the Blaine County #5 Compressor Station.

The main purpose of this facility is to gather and transmit natural gas using a reciprocating natural gas-fired engine, which drives a gas compressor. The dehydrator unit removes moisture from the natural gas before transmitting the gas downstream for further processing.

C. Permit History

On March 10, 2001, Permit **#3145-00** was issued to Klabzuba Oil & Gas, Inc. (Klabzuba) for the construction and operation of the Dry Fork Compressor Station located approximately 12 miles north of Chinook in the SE¼ of the SE¼ of Section 19, Township 35 North, Range 20 East, in Blaine County, Montana.

On May 3, 2001, Klabzuba requested that Permit #3145-00 be transferred to Havre Pipeline Company (HPC). In addition, HPC requested the facility be referred to as Blaine County #5 Compressor Station rather than the Dry Fork Compressor Station. The permit action transferred the permit from Klabzuba to HPC and changed the name of the compressor station from Dry Fork to Blaine County #5. Permit **#3145-01** replaced Permit #3145-00.

On May 24, 2004, the Department of Environmental Quality (Department) received a complete application from HPC for the modification of Montana Air Quality Permit #3145-01. The current permit action replaces the previously permitted 738-hp Waukesha 3521GSI compressor engine with a 250-hp Waukesha F11GSI compressor engine. Permit **#3145-02** replaced Permit #3145-01.

On August 23, 2004, the Department received a request to change the corporate name on Permit #3145-02 from HPC to Devon. The permit action changed the corporate name on Permit #3145-02 from HPC to Devon. Permit **#3145-03** replaced Permit #3145-02.

#### D. Current Permit Action

On July 19, 2005, the Department received a complete application from Devon requesting a change to air quality Permit #3145-03. The proposed change includes adding a rich-burn compressor engine equal to, or less than 325 hp equipped with a non-selective catalytic reduction (NSCR) unit and an air to fuel ratio (AFR) controller. Permit **#3145-04** replaces Permit #3145-03.

#### E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

### II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

#### A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

Devon shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than four hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM<sub>10</sub>
11. ARM 17.8.230 Fluoride in Forage

Devon must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over six consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, Devon shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions. Devon will consume pipeline quality natural gas, which will meet this limitation.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 Code of Federal Regulations (CFR 60), Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR 60 and because it does not meet the definition of a natural gas processing plant defined in 40 CFR 60, Subpart KKK.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR 63, shall comply with the requirements of 40 CFR 63, as listed below:

40 CFR 63, Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities. Owners or operators of oil and natural gas production facilities, as defined and applied in 40 CFR Part 63, shall comply with the applicable provisions of 40 CFR Part 63, Subpart HH. In order for a natural gas production facility to be subject to 40 CFR Part 63, Subpart HH requirements, certain criteria must be met. First, the facility must be a major source of Hazardous Air Pollutants (HAPs) as determined according to paragraphs (a)(1)(i) through (a)(1)(iii) of 40 CFR 63, Subpart HH. Second, a facility that is determined to be major for HAPs must also either process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer, or process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user. Third, the facility must also contain an affected source as specified in paragraphs (b)(1) through (b)(4) of 40 CFR Part 63, Subpart HH. Finally, if the first three criteria are met, and the exemptions contained in paragraphs (e)(1) and (e)(2) of 40 CFR Part 63, Subpart HH do not apply, the facility is subject to the applicable provisions of 40 CFR Part 63, Subpart HH. Based on the information submitted by Devon, the compressor station is not subject to the provisions of 40 CFR Part 63, Subpart HH because the facility is not a major source of HAPs.

40 CFR 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. Owners or operators of natural gas transmission or storage facilities, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart HHH. In order for a natural gas transmission and storage facility to be subject to 40 CFR Part 63, Subpart HHH requirements, certain criteria must be met. First, the facility must transport or store natural gas prior to the gas entering the pipeline to a local distribution company or to a final end user if there is no local distribution company. Second, the facility must be a major source of HAPs as determined using the maximum natural gas throughput as calculated in either paragraphs (a)(1) and (a)(2) or paragraphs (a)(2) and (a)(3) of 40 CFR Part 63, Subpart HHH. Third, a facility must contain an affected source (glycol dehydration unit) as defined in paragraph (b) of 40 CFR Part 63, Subpart HHH. Finally, if the first two criteria are met, and the exemptions contained in paragraph (f) of 40 CFR Part 63, Subpart HHH, do not apply, the facility is subject to the applicable provisions of 40 CFR Part 63, Subpart HHH. Based on the information submitted by Devon, the compressor station is not subject to the provisions of 40 CFR 63, Subpart HHH because the facility is not a major source of HAPs.

- D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. Devon submitted the appropriate permit application fee for the current permit action.

2. ARM 17.8.505 When Permit Required--Exclusions. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

F. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year of any pollutant. Devon has an uncontrolled PTE greater than 25 tons per year of carbon monoxide (CO) and nitrogen oxides (NO<sub>x</sub>); therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration, or use of a source. Devon submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Devon submitted an affidavit of publication of public notice for the July 19, 2005, issue of the *Havre Daily News*, a newspaper of general circulation in the Town of Havre in Hill County, as proof of compliance with the public notice requirements.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
  9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Devon of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
  10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
  11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than one year after the permit is issued.
  12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
  13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
  14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.
- G. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:
1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
  2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since this facility is not a listed source and the facility's PTE is below 250 tons per year of any pollutant (excluding fugitive emissions).

H. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:
  - a. PTE > 100 tons/year of any pollutant;
  - b. PTE > 10 tons/year of any one HAP, PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
  - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) in a serious PM<sub>10</sub> nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3145-04 for Devon, the following conclusions were made:
  - a. The facility's PTE is less than 100 tons/year for any pollutant.
  - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.
  - c. This source is not located in a serious PM<sub>10</sub> nonattainment area.
  - d. This facility is not subject to any current NSPS.
  - e. This facility is not subject to any current NESHAP standards.
  - f. This source is not a Title IV affected source, nor a solid waste combustion unit.
  - g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that Devon would be a minor source of emissions as defined under Title V.

III. BACT Determination

A BACT determination is required for each new or altered source. Devon shall install on the new or altered source the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized.

A BACT analysis was submitted by Devon in Permit Application #3145-04, addressing some available methods of controlling emissions from the sources used at the Blaine County #5 Compressor Station. The Department reviewed these methods, as well as previous BACT determinations in order to make the following BACT determinations.

## A. Compressor Engines

### 1. NO<sub>x</sub> and CO BACT

Based on past Department determinations rich-burn natural gas compressor engines controlled with non-selective catalytic reduction (NSCR) and an air-to-fuel ratio (AFR) controller meeting emission limits of 1.0 gram per brake horsepower-hour (g/bhp-hr) NO<sub>x</sub> and 2.0 g/bhp-hr CO are considered BACT. Rich-burn engine technology with NSCR and AFR control is considered the most technically practicable and economically feasible control of NO<sub>x</sub> and CO from compressor engines. Devon proposes to utilize rich-burn engines with NSCR and AFR control.

As proposed by Devon, the Department determined that NSCR unit and an AFR controller constitutes BACT for the reduction of NO<sub>x</sub> and CO emissions resulting from the operation of the natural gas compressor engines. NSCR/AFR control typically constitutes BACT for natural gas compressor engines. NSCR/AFR control effectively reduces NO<sub>x</sub> and CO emissions and represents a technically, economically, and environmentally feasible option for the control of NO<sub>x</sub> and CO resulting from internal combustion engines such as those proposed for the current permit action. Further, it has been demonstrated that these technologies, operated together, are capable of achieving the g/bhp-hr BACT emission limits established for the proposed compressor engines. The g/bhp-hr limits established as BACT include 1.0 g/bhp-hr for NO<sub>x</sub> and 2.0 g/bhp-hr for CO.

### 2. VOC BACT

The Department is not aware of any BACT determinations that have required controls for VOC emissions from natural gas fired compressor engines. Devon proposed the use of an NSCR unit and an AFR controller to meet a lb/hr limit equivalent to 1.0 g/bhp-hr. However, the Department does not consider the NSCR unit and the AFR controller to be BACT for VOC because the cost per ton of VOC reduced would be above industry norm. The Department determined that no additional controls and burning pipeline quality natural gas to meet an emission limit of 1.0 g/bhp-hr constitutes BACT for each of the proposed compressor engines.

### 3. PM<sub>10</sub> and SO<sub>2</sub> BACT

The Department is not aware of any BACT determinations that have required controls for PM<sub>10</sub> or sulfur dioxide (SO<sub>2</sub>) emissions from natural gas fired compressor engines. Devon proposed no additional controls and burning pipeline quality natural gas as BACT for PM<sub>10</sub> and SO<sub>2</sub> emissions from each of the proposed compressor engines. Due to the relatively small amount of PM<sub>10</sub> and SO<sub>2</sub> emissions from the proposed engines, any add-on controls would be cost prohibitive. Therefore, the Department concurred with Devon's BACT proposal and determined that no additional controls and burning pipeline quality natural gas will constitute BACT for PM<sub>10</sub> and SO<sub>2</sub> emissions from each of the compressor engines.

## IV. Emission Inventory

Source	Ton/year				
	PM <sub>10</sub>	NO <sub>x</sub>	CO	VOC	SO <sub>x</sub>
Waukesha F11GSI Compressor Engine	0.08	2.41	1.22	2.41	0.00
ALCO Dehydrator Unit	0.01	0.16	0.14	2.98	0.00
325-hp Compressor Engine	0.10	3.14	6.28	3.14	0.01
<b>Total</b>	<b>0.19</b>	<b>5.71</b>	<b>7.64</b>	<b>8.53</b>	<b>0.01</b>

### Waukesha F11GSI Compressor Engine

Heat Input Capacity: 1.9 MMBtu/hr (Company Information)  
Annual Operation: 8,760 hr/yr  
Engine Power Output: 250 bhp

#### PM<sub>10</sub> Emissions:

Emission Factor: 9.91E-03 lb/MMBtu (AP-42, Section 3.2, Table 3.2-3, 07/00)  
Calculations:  $9.91\text{E-}03 \text{ lb/MMBtu} * 1.9 \text{ MMBtu/hr} = 0.019 \text{ lb/hr}$   
 $0.023 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.08 \text{ ton/yr}$

#### NO<sub>x</sub> Emissions:

Emission Factor: 1.0 g/bhp-hr (Department BACT Determination)  
Calculations:  $1.0 \text{ g/bhp-hr} * 250 \text{ bhp} * 0.002205 \text{ lb/g} = 0.55 \text{ lb/hr}$   
 $0.55 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 2.41 \text{ ton/yr}$

#### CO Emissions:

Emission Factor: 0.5 g/bhp-hr (Department BACT Determination)  
Calculations:  $0.5 \text{ g/bhp-hr} * 250 \text{ bhp} * 0.002205 \text{ lb/g} = 0.28 \text{ lb/hr}$   
 $0.28 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 1.22 \text{ ton/yr}$

#### VOC Emissions:

Emission Factor: 1.0 g/bhp-hr (Department BACT Determination)  
Calculations:  $1.0 \text{ g/bhp-hr} * 250 \text{ bhp} * 0.002205 \text{ lb/g} = 0.55 \text{ lb/hr}$   
 $0.55 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 2.41 \text{ ton/yr}$

#### SO<sub>x</sub> Emissions:

Emission Factor: 5.88E-04 lb/MMBtu (AP-42, Section 3.2, Table 3.2-3, 07/00)  
Calculations:  $5.88\text{E-}04 \text{ lb/MMBtu} * 1.9 \text{ MMBtu/hr} = 0.001 \text{ lb/hr}$   
 $0.001 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.004 \text{ ton/yr}$

### ALCOA Dehydrator Unit

Maximum Design Capacity: 0.375 Bhp  
Hours of Operation: 8,760 hr/yr  
Fuel Heating Value: 1,000 Btu/SCF or 0.0010 MMSCF/MMBtu  
Fuel Combustion Rate:  $0.375 \text{ MMBtu} * 0.001 \text{ MMSCF/MMBtu} * 8,760 \text{ hr/yr} = 3.285 \text{ MMSCF/yr}$  {Manufacturers Data}

### Reboiler

#### PM<sub>10</sub> Emissions:

Emission Factor: 7.6 lb/MMSCF {AP-42 Table 1.4-2 (7/98)}  
Control Efficiency: 0%  
Calculations:  $7.6 \text{ lb/MMSCF} * 3.285 \text{ MMSCf/yr} * 0.0005 \text{ ton/lb} = 0.012 \text{ ton/yr}$

#### NO<sub>x</sub> Emissions:

Emission Factor: 100 lb/MMSCF {AP-42 Table 1.4-1 (7/98)}  
Control Efficiency: 0%  
Calculations:  $100 \text{ lb/MMSCF} * 3.285 \text{ MMSCf/yr} * 0.0005 \text{ ton/lb} = 0.164 \text{ ton/yr}$

#### CO Emissions:

Emission Factor: 84 lb/MMSCF {AP-42 Table 1.4-1 (7/98)}  
Control Efficiency: 0%  
Calculations:  $84 \text{ lb/MMSCF} * 3.285 \text{ MMSCf/yr} * 0.0005 \text{ ton/lb} = 0.138 \text{ ton/yr}$

**VOC Emissions:**

Emission Factor: 5.5 lb/MMSCF {AP-42 Table 1.4-2 (7/98)}  
Control Efficiency: 0%  
Calculations:  $5.5 \text{ lb/MMSCF} * 3.285 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.009 \text{ ton/yr}$

**SO<sub>x</sub> Emissions:**

Emission Factor: 0.6 lb/MMSCF {AP-42 Table 1.4-2 (7/98)}  
Control Efficiency: 0%  
Calculations:  $0.6 \text{ lb/MMSCF} * 3.285 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.001 \text{ ton/yr}$

**Still Vent**

**VOC Emissions:**

Emission Factor: 0.2237 lb/hr {GRI-GLYcalc, EPA Approved Still Vent Emission Estimation Program}  
Control Efficiency: 0%  
Calculations:  $0.2237 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.980 \text{ ton/yr}$

**HAPs Emissions:**

Emission Factor: 0.0563 lb/hr {GRI-GLYcalc, EPA Approved Still Vent Emission Estimation Program}  
Control Efficiency: 0%  
Calculations:  $0.0563 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.247 \text{ ton/yr}$

**Flash Tank Off Gas**

**VOC Emissions:**

Emission Factor: 0.04544 lb/hr {GRI-GLYcalc, EPA Approved Still Vent Emission Estimation Program}  
Control Efficiency: 0%  
Calculations:  $0.04544 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 1.990 \text{ ton/yr}$

**HAPs Emissions:**

Emission Factor: 0.0563 lb/hr {GRI-GLYcalc, EPA Approved Still Vent Emission Estimation Program}  
Control Efficiency: 0%  
Calculations:  $0.0563 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.247 \text{ ton/yr}$

**Compressor Engine 325 hp**

Brake Horsepower: 325 bhp  
Hours of operation: 8,760 hr/yr

**PM<sub>10</sub> Emissions**

Emission Factor: 9.50E-03 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)  
Fuel Consumption: 2.31 MMBtu/hr (Maximum Design)  
Calculations:  $2.31 \text{ MMBtu/hr} * 9.50\text{E-}03 \text{ lb/MMBtu} = 0.02 \text{ lb/hr}$   
 $0.02 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.10 \text{ ton/yr}$

**NO<sub>x</sub> Emissions**

Emission factor: 1.0 gram/bhp-hour (BACT Determination)  
Calculations:  $1.0 \text{ gram/bhp-hour} * 325 \text{ bhp} * 0.002205 \text{ lb/gram} = 0.72 \text{ lb/hr}$   
 $0.72 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 3.14 \text{ ton/yr}$

**VOC Emissions**

Emission factor: 1.0 gram/bhp-hour (BACT Determination)  
Calculations:  $1.0 \text{ gram/bhp-hour} * 325 \text{ bhp} * 0.002205 \text{ lb/gram} = 0.72 \text{ lb/hr}$   
 $0.72 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 3.14 \text{ ton/yr}$

#### CO Emissions

Emission factor: 2.0 grams/bhp-hour (BACT Determination)  
Calculations:  $2.0 \text{ gram/bhp-hour} * 325 \text{ bhp} * 0.002205 \text{ lb/gram} = 1.43 \text{ lb/hr}$   
 $22.23 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 6.28 \text{ ton/yr}$

#### SO<sub>x</sub> Emission

Emission factor: 5.88E-04 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)  
Fuel Consumption: 2.31 MMBtu/hr (Maximum Design)  
Calculations:  $2.31 \text{ MMBtu/hr} * 5.88\text{E-}04 \text{ lb/MMBtu} = 0.00 \text{ lb/hr}$   
 $0.00 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.01 \text{ ton/yr}$

### V. Existing Air Quality

The Devon Compressor Station is located approximately 12 miles north of Chinook in the SE¼ of the SE¼ of Section 19, Township 35 North, Range 20 East, in Blaine County, Montana. Blaine County is unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants.

### VI. Ambient Air Impact Analysis

The Department determined, based on ambient air quality modeling, that the impact from this permitting action will be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

Bison Engineering, Inc. (Bison) submitted the modeling on behalf of Devon. The airborne concentration of NO<sub>x</sub> was modeled to demonstrate compliance with the MAAQS and NAAQS, respectively. The ISC3 model was used with five years of meteorological data (1987-1991). Both the surface and upper air data was collected at the Great Falls National Weather Station, MT (#24143). Bison used the default anemometer height (10.00 meters (m)) rather than the correct height (6.71 m).

The receptor grid elevations were derived from digital elevation model (DEM) files from the United States Geological Survey (USGS) 7.5-minute series (1:24,000 scale) NAD 1927 digitized topographical maps. The North Chinook Reservoir, Rabbit Hills, Richmond Reservoir, Richmond Reservoir SW, Telescope Coulee, and Tule Lake were used to determine the receptor grids. The total number of receptors was 2,781. Eight receptors were placed along the fence line at no more than 50-m intervals. A Cartesian receptor grid of 2,773 receptors was developed outside the fence line boundary. Receptors were placed at 100-m spacing for a distance of 1 kilometer (km) from the fence line. For a distance of 1 km to 3 km from the fence line, receptors were placed at 250-m intervals. From 3 km to 10 km, receptors were located at 500-m intervals. All receptors used the Universal Transverse Mercator (UTM) coordinate system, NAD 1927. No building downwash was considered.

First, a Significant Impact Analysis (SIA) was performed on the new engine emissions only. The highest modeled annual NO<sub>x</sub> concentration from this new engine was 4.93 micrograms per cubic meter (µg/m<sup>3</sup>), which exceeded the significance level of 1 µg/m<sup>3</sup>; therefore, a Full Impact Analysis (FIA) was conducted. The radius of impact was about 0.4 km. This analysis requires including all facility sources, nearby off-site sources, nearby sources that have submitted a completed Prevention of Significant Deterioration (PSD) application, and other background sources. One major and minor stationary source exists within 50 km of this compressor station; however, at the discretion of the Department, further modeling by Bison did not include this source. The HPC Blaine County #4 compressor engine (BC#4) was included; this station is located within 10 km of the Blaine County #5 Compressor Station.

The air dispersion modeling results for NO<sub>x</sub> obtained by Bison were in terms of peak annual and high-second-high 1-hour concentrations as displayed in Table 1. Although the results included the modeled concentrations for four source groups, only the two source groups were evaluated for this review: “All” and “BC5E2”. The “All” group consisted of all sources including the BC#4 compressor engine and the proposed BC#5 compressor engine; the “BC5E2” represented the new 325-hp compressor engine at Blaine County #5. The annual NAAQS for NO<sub>2</sub> is 100 µg/m<sup>3</sup> while the annual MAAQS is 94 µg/m<sup>3</sup>, and the 1-hour MAAQS is 564 µg/m<sup>3</sup>. The Ambient Ratio Method and the Ozone Limiting Method were not applied to the NO<sub>x</sub> emissions to convert the modeled concentrations to NO<sub>2</sub> for comparison to the NAAQS/MAAQS. Bison justified this action since the NO<sub>x</sub> concentrations were significantly below the NAAQS/MAAQS or PSD increment.

Table 1. Ambient Air Dispersion Model Results for NO<sub>2</sub>

Avg. Period	Source Group	Modeled Conc. (µg/m <sup>3</sup> )	OLM <sup>a</sup> /ARM <sup>b</sup> Adjusted to NO <sub>2</sub> (µg/m <sup>3</sup> )	Back-ground Conc. (µg/m <sup>3</sup> )	Ambient Conc. (µg/m <sup>3</sup> )	NAAQS (µg/m <sup>3</sup> )	MAAQS (µg/m <sup>3</sup> )	% of NAAQS/MAAQS
Annual <sup>c</sup>	All	10.44	NA <sup>a</sup>	6	16.44	100	94	16.4 / 17.5
Annual <sup>c</sup>	BC5E2	4.93	NA <sup>a</sup>	6	10.93	100	94	10.9 / 11.6
1-HR <sup>d</sup>	All	165.70	NA <sup>b</sup>	75	240.70	----	564	---- / 42.7
1-HR <sup>d</sup>	BC5E2	84.00	NA <sup>b</sup>	75	159.00	----	564	---- / 28.2

a. Concentrations were not calculated using the Ozone Limiting Method.

b. The Ambient Ratio Method with National Default of 75 percent was not applied.

c. Peak annual results were reported.

d. One hour (1-HR) results were high-second-high

In summary, modeling was conducted to determine compliance with the MAAQS and the NAAQS, and the NO<sub>x</sub> PSD increments. The modeling results demonstrated that neither the MAAQS nor the NAAQS would be violated. In addition, the PSD increment analysis for NO<sub>x</sub> demonstrated that the Class II NO<sub>x</sub> increment would not be exceeded.

As shown in Table 1, the peak modeled annual concentration for all of the evaluated sources was 16.4 µg/m<sup>3</sup> while the individual contribution from the new 325-hp compressor engine at Blaine County #5 compressor station was 10.9 µg/m<sup>3</sup>. The peak modeled second high 1-hour concentration was about 241 µg/m<sup>3</sup> for all sources and 159 µg/m<sup>3</sup> for the new compressor engine. The high annual receptor for the “All” and “BC5E2” source groups occurred at the northeast corner of the fence line of the Blaine County #5 facility. The high 2<sup>nd</sup> high 1-hour receptor for these two source groups was located about 100 m south of the Blaine County #5 fence line using the 1989 Great Falls met data.

Although a PSD increment analysis was not required by the Ambient Ratio Method, due to the high projected development of coal bed methane in Montana, the Department requested that Devon demonstrate compliance with PSD increments for NO<sub>x</sub>. Therefore, a Class II increment analysis was conducted for the region. However, while modeling demonstrations for ambient standards typically use permitted allowables to demonstrate compliance with ambient standards, modeling demonstrations for PSD increments use actual emissions. In this case, actual emissions were not available so permitted allowable emissions were entered into the model which provided a worst-case scenario. Table 3 shows the results of the Class II increment analysis.

Table 2. Class II Modeling Results

Avg. Period	Source Group	Class II Modeled Conc. <sup>a</sup> (µg/m <sup>3</sup> )	Class II Increment (µg/m <sup>3</sup> )	% Class II Increment Consumed
All	635526	5403692	7.83	25
BC5E2	635526	5403692	3.70	25

<sup>a</sup> Applying Ambient Ratio Method with national default of 75%

The new 325-hp compressor engine at Blaine County #5 used approximately 15% of the Class II increment while the All sources (both Blaine County #5 compressor engines and Blaine County #4 compressor engine) consumed about 31% of the increment in this modeling domain. Since allowable emissions were used instead of actual emissions for this analysis, the results are conservatively high.

Based on the above modeling analysis, the Department determined that Blaine County #5 will not cause or contribute to a violation of any ambient air quality standard or PSD increment.

#### VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

#### VIII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**Permitting and Compliance Division**  
**Air Resources Management Bureau**  
**P.O. Box 200901, Helena, Montana 59620**  
**(406) 444-3490**

**FINAL ENVIRONMENTAL ASSESSMENT (EA)**

*Issued To:* Devon Louisiana Corporation  
PO Box 2606  
Havre, Montana 59501

*Air Quality Permit Number:* 3145-04

*Preliminary Determination Issued:* August 18, 2005

*Department Decision Issued:* September 6, 2005

*Permit Final:* September 22, 2005

1. *Legal Description of Site:* The Devon station would remain located in the SE¼ of the SE¼ of Section 19, Township 35 North, Range 20 East, in Blaine County, Montana.
2. *Description of Project:* Devon proposes to construct and operate one additional rich-burn engine having a maximum rated design capacity equal to, or less than 325 hp with an NSCR and an AFR controller for the compression and transportation of natural gas.
3. *Objectives of Project:* The proposed project would provide business and revenue for Devon by allowing the company to gather field gas. Natural gas would be subsequently conditioned to meet natural gas quality standards for sale.
4. *Alternatives Considered:* In addition to the proposed action, the Department considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the “no-action” alternative to be appropriate because Devon demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the “no-action” alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in Permit #3145-04.
6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and would not unduly restrict private property rights.

7. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats			X			Yes
B	Water Quality, Quantity, and Distribution			X			Yes
C	Geology and Soil Quality, Stability and Moisture			X			Yes
D	Vegetation Cover, Quantity, and Quality			X			Yes
E	Aesthetics			X			Yes
F	Air Quality			X			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources			X			Yes
H	Demands on Environmental Resource of Water, Air and Energy			X			Yes
I	Historical and Archaeological Sites			X			Yes
J	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats

Minor impacts to terrestrial and aquatic life and habitats would be expected from the proposed project because deer, antelope, coyotes, geese, ducks, and other terrestrials would potentially use the area around the additional engine and because the additional engine would be a source of air pollutants. The additional engine would emit air pollutants and corresponding deposition of pollutants would occur; however, as described in Section 7.F. of this EA, the Department determined that any impacts from deposition would be minor. In addition, minor land disturbance would occur through additional engine construction activities. Any impacts from the additional engine construction would be minor due to the relatively small size of the project and the relatively short period of time required for construction. Overall, any impacts to terrestrial and aquatic life and habitats would be minor.

B. Water Quality, Quantity, and Distribution

Minor impacts would be expected on water quality, quantity, and distribution from the proposed project because the additional engine would be a source of air pollutants. The additional engine would have no discharges into surface water. However, minor amounts of water may be required to control fugitive dust emissions from the access roads and the general facility property. In addition, the additional engine would emit air pollutants and corresponding deposition of pollutants would occur. However, as described in Section 7.F. of this EA, the Department determined that any impact resulting from the deposition of pollutants on water quality, quantity, and distribution would be minor.

Further, water quality, quantity, and distribution would not be impacted from constructing the additional engine because there is no surface water at or relatively close to the site. Furthermore, no direct discharges into surface water would occur and no use of surface water

would be expected for the additional engine construction. Therefore, no impacts to water quality, quantity, and distribution would be expected from the additional engine construction. Overall, any impacts to water quality, quantity, and distribution would be minor.

C. Geology and Soil Quality, Stability, and Moisture

Minor impacts would occur on the geology and soil quality, stability, and moisture from the proposed project because minor construction would be required to develop the additional engine. Small buildings would be constructed and natural gas pipelines would be installed. In addition, no discharges, other than air emissions, would occur at the facility. Any impacts to the geology and soil quality, stability and moisture from the additional engine construction would be minor due to the relatively small size of the project.

Further, deposition of pollutants would occur; however, as described in Section 7.F of this EA, the Department determined that any impacts resulting from the deposition of pollutants on the soils surrounding the site would be minor. Overall, any impacts to the geology and soil quality, stability, and moisture would be minor.

D. Vegetation Cover, Quantity, and Quality

Minor impacts would occur on vegetation cover, quantity, and quality because minor construction would be required to develop the additional engine. Small buildings would be constructed and natural gas pipelines would be installed.

In addition, no discharges, other than air emissions, would occur at the facility. Any impacts to the vegetation cover, quantity, and quality from the additional engine construction would be minor due to the relatively small size of the project.

The additional engine would be a source of air pollutants and corresponding deposition of pollutants would occur. However, as described in Section 7.F of this EA, the Department determined that any impacts resulting from the deposition of pollutants on the existing vegetation cover, quantity, and quality would be minor. Overall, any impacts to vegetation cover, quantity, and quality would be minor.

E. Aesthetics

Minor impacts would result on the aesthetic values of the area because the additional engine would be a new facility. A small building would be constructed to house the engine. However, any visual aesthetic impacts would be minor because the addition is a relatively small industrial facility.

The additional engine would also create additional noise in the area. However, any auditory aesthetic impacts would be minor because the compressor engines would be required to operate enclosed indoors and with an oxidation catalyst. Oxidation catalysts are typically designed to be installed in mufflers. Overall, any aesthetic impacts would be minor.

F. Air Quality

The air quality of the area would realize minor impacts from the proposed project because the additional engine would emit the following air pollutants: PM<sub>10</sub>; NO<sub>x</sub>; CO; VOC, including HAPs; and sulfur oxides (SO<sub>x</sub>). Air emissions from the additional engine would be minimized by limitations and conditions that would be included in Permit #3145-04. Conditions would

include, but would not be limited to, BACT emission limits and opacity limitations on the proposed engine and the general facility. In addition, based on previous analysis of sources of this type operating under similar conditions, the Department believes that the emissions resulting from the proposed engines exhibit good dispersion characteristics resulting in relatively low deposition impacts. While deposition of pollutants would occur as a result of operating the additional engine, the Department determined that the impacts from deposition of pollutants would be minor due to dispersion characteristics of pollutants (stack height, stack temperature, etc.), the atmosphere (wind speed, wind direction, ambient temperature, etc.), and conditions that would be placed in Permit #3145-04. The air concentration of pollutants would be relatively small, and the corresponding deposition of those air pollutants would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

In an effort to identify any unique endangered, fragile, or limited environmental resources in the area, the Department contacted the Montana Natural Heritage Program, Natural Resource Information System (NRIS). In this case, the area was defined by the section, township, and range of the proposed location with an additional 1-mile buffer zone. The NRIS did not find any unique, endangered, fragile, or limited environmental resources near the proposed site. Due to the minor amounts of construction that would be required and the relatively low levels of pollutants that would be emitted, the Department determined that it would be unlikely that the proposed project would impact any species of special concern and that any potential impacts would be minor.

H. Demands on Environmental Resource of Water, Air, and Energy

The proposed project would have minor impacts on the demands for the environmental resources of air and water because the additional engine would be a source of air pollutants. Deposition of pollutants would occur as a result of operating the additional engine; however, as explained in Section 7.F of this EA, the Department determined that any impacts on air and water resources from the pollutants (including deposition) would be minor.

The proposed project would be expected to have minor impacts on the demand for the environmental resource of energy because power would be required at the site. The impact on the demand for the environmental resource of energy would be minor because the additional engine would be relatively small by industrial standards. Overall, the impacts for the demands on the environmental resources of water, air, and energy would be minor.

Since controlled emissions from the proposed station would exhibit good dispersion characteristics and would not exceed any Montana ambient air quality modeling threshold, the Department determined that controlled emissions from the source will not cause or contribute to a violation of any ambient air quality standard. Therefore, any impacts to air quality from the proposed additional engine would be minor.

I. Historical and Archaeological Sites

In an effort to identify any historical and archaeological sites located near the proposed project area, the Department contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO records, there are not any previously recorded historic or archaeological sites within the proposed area. However, SHPO stated that the absence of cultural properties in the area does not mean that they do not exist, but may reflect a lack of previous cultural resource inventories in the area because SHPO records indicate only one previous cultural resource inventory has been conducted. Because only one previous cultural

resource inventory has been conducted, SHPO recommended that a cultural resource inventory be conducted prior to construction activities to determine whether any historical or archaeological sites exist in the area. However, neither SHPO nor the Department has the authority to require a cultural authority resource inventory. Overall, the Department determined that the chance of the project impacting any historical and archaeological sites in the area would be minor due to the relatively small size of the project.

#### J. Cumulative and Secondary Impacts

Overall, the cumulative and secondary impacts on the physical and biological aspects of the human environment in the immediate area would be minor due to the relatively small size of the project and little construction activities associated with this type of additional engine. The Department believes that this additional engine could be expected to operate in compliance with all applicable rules and regulations as would be outlined in Permit #3145-04.

Additional facilities (compressor stations, gas plants, etc.) could locate in the area to withdraw natural gas from the nearby area and/or to separate the components of natural gas. However, any future facilities would be required to apply for and receive the appropriate permits from the appropriate regulating authority. Environmental impacts from any future facilities would be assessed through the appropriate permitting process.

8. The following table summarizes the potential economic and social effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores			X			Yes
B	Cultural Uniqueness and Diversity			X			Yes
C	Local and State Tax Base and Tax Revenue			X			Yes
D	Agricultural or Industrial Production			X			Yes
E	Human Health			X			Yes
F	Access to and Quality of Recreational and Wilderness Activities			X			Yes
G	Quantity and Distribution of Employment			X			Yes
H	Distribution of Population			X			Yes
I	Demands for Government Services			X			Yes
J	Industrial and Commercial Activity			X			Yes
K	Locally Adopted Environmental Plans and Goals				X		Yes
L	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL ECENOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department.

- A. Social Structures and Mores
- B. Cultural Uniqueness and Diversity

The proposed project would cause minor, if any, impacts to the above social and economic resources in the area because the proposed project would take place in a relatively remote location. Further, the operation of an additional engine necessitates one employee for normal operations and would likely not result in any, or very little, immigration of new people to the area for employment purposes; thereby, having little, if any, impact on the above social and economic resources of the area.

Additional activity (vehicle traffic, construction equipment, etc.) would be noticeable during the additional engine construction and would typically not require day-to-day employees once the additional engine is constructed; activities associated with the operation of the additional engine would be minor. Overall, any impacts to the above social and economic resources in the area would be minor.

- C. Local and State Tax Base and Tax Revenue

The proposed project would result in minor impacts to the local and state tax base and tax revenue because relatively few new employees would be expected as a result of constructing the additional engine. Further, the proposed project would necessitate relatively little construction and typically would not require an extended period of time for completion. Therefore, any construction related jobs would be temporary and any corresponding impacts on the tax base/revenue in the area would be minor. Overall, any impacts to the local and state tax base would be minor.

- D. Agricultural or Industrial Production

The land at the proposed location is rural agriculture grazing land. However, because the additional engine would be relatively small, the proposed project would result in only minor impacts to agricultural production. The proposed project would have minor impacts to industrial production because the proposed project would be a new industrial source locating in the proposed area. However, because the additional engine would be relatively small by industrial standards, the project would likely not result in additional industrial sources, thereby resulting in relatively minor impact to industrial production of the area.

Additional facilities (compressor stations, gas plants, etc.) could locate in the area to withdraw natural gas from the nearby area and/or to separate the components of natural gas. However, any future facility would be required to apply for and receive the appropriate permits from the appropriate regulating authority. Environmental impacts from any future facilities would be assessed through the appropriate permitting process. Overall, any impacts to agricultural or industrial production of the area would be minor.

- E. Human Health

The proposed project would result in minor, if any, impacts to human health. As explained in Section 7.F of this EA, deposition of pollutants would occur; however, the Department determined that the proposed project would comply with all applicable air quality rules, regulations, and standards. These rules, regulations, and standards are designed to be protective of human health. Overall any impacts to public health would be minor.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed project would have minor, if any, impacts on access to recreational and wilderness activities because of the relatively remote location and the relatively small size of the additional engine. The proposed project would have minor impacts on the quality of recreational and wilderness activities in the area because the additional engine, while relatively small by industrial standards, would be visible and would produce noise. Overall any impacts to the access to and quality of recreational and wilderness activities in the area would be minor.

G. Quantity and Distribution of Employment

H. Distribution of Population

The proposed project would have minor impacts on the employment and population because four permanent employees would be required for normal operations thereby resulting in relatively minor, if any, new immigration to the area. In addition, temporary construction-related positions would result from this project. However, any impacts to the quantity and distribution of employment from construction related employment would be minor due to the relatively small size of the additional engine and the relatively short time period that would be required for constructing the additional engine. Overall, any impacts to the above social and economic resources in the area would be minor.

I. Demands for Government Services

There would be minor impacts on the demands for government services because additional time would be required by government agencies to issue Permit #3145-04 and to assure compliance with applicable rules, standards, and conditions that would be contained in Permit #3145-04. In addition, there would be minor impacts on the demands for government services to regulate the increase in vehicle traffic that would be associated with constructing and operating the facility. The increase in vehicle traffic would be primarily during facility construction but the gas gathering plant typically does require day-to-day employees. Therefore, vehicle traffic would be relatively minor due to the relatively short time period that would be required to construct the facility and the day-to-day over-site of the plant by permanent employees. Overall, any demands for government services to regulate the facility or activities associated with the facility would be minor due to the relatively small size of the facility.

J. Industrial and Commercial Activity

Only minor impacts would be expected on the local industrial and commercial activity because the proposed project would represent only a minor increase in the industrial and commercial activity in the area. The proposed project would be relatively small and would take place at a relatively remote location.

Additional facilities (compressor stations, gas plants, etc.) could locate in the area to withdraw natural gas from the nearby area and/or to separate the components of natural gas. However, any future facility would be required to apply for and receive the appropriate permits from the appropriate regulating authority. Environmental impacts from any future facilities would be assessed through the appropriate permitting process. Overall, any impacts to the local industrial and commercial activity of the area would be minor.

K. Locally Adopted Environmental Plans and Goals

The Department is unaware of any locally adopted environmental plans or goals. The permit would ensure compliance with state standards and goals.

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from this project would result in minor impacts to the economic and social aspects of the human environment in the immediate area. Due to the relatively small size of the project, the industrial production, employment, and tax revenue (etc.) impacts resulting from the proposed project would be minor. In addition, the Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in Permit #3145-04.

Additional facilities (compressor stations, gas plants, etc.) could locate in the area to withdraw natural gas from the nearby area and/or to separate the components of natural gas. However, any future facility would be required to apply for and receive the appropriate permits from the appropriate regulating authority. Environmental impacts from any future facilities would be assessed through the appropriate permitting process.

*Recommendation:* No EIS is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permit action is for the addition of new equipment at the Devon compressor station. Permit #3145-04 would include conditions and limitations to ensure the facility would operate in compliance with all applicable rules and regulations. In addition, as detailed in the above EA there are no significant impacts associated with the proposed project.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau, Montana Historical Society – State Historic Preservation Office.

EA prepared by: Chris Ames

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